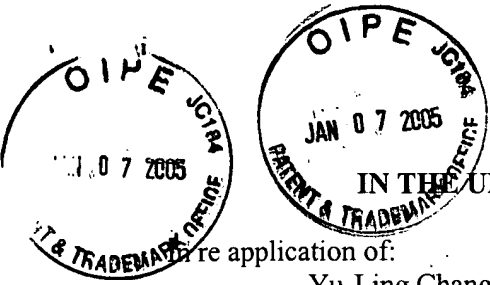


IFW



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re application of:
Yu-Ling Chang, et al.

Serial No.: 10/775,802

Filed: February 10, 2004

For: Tank Scheduling Optimization for
Replicated Chemical in a
Semiconductor Manufacturing Wet
Bench

§
§
§
§
§
§
§
§
§

Docket No.: 2003-0230/24061.65

Customer No. 42717

Group Art Unit: 2121

Examiner: TBD

Conf. No.: 9688

TRANSMITTAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Enclosed for filing in the above-identified patent application.

1. Power of Attorney with copy of executed Assignment; and
2. Return Receipt Postcard

Applicant believes no fee is due. However, the Director is authorized to charge any deficiency fees or credit any overpayments to Deposit Account No. 08-1394 of Haynes and Boone, LLP.

Respectfully submitted,

David M. O'Dell
Reg. No. 42,044

Date: 1-4-05

HAYNES AND BOONE, LLP
901 Main Street, Suite 3100
Dallas, Texas 75202-3789
Telephone: 972-739-8635
Facsimile: 214-200-0853

Customer Number: 42717

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below:

Bonnie Boyle
Name

1-4-05
Date



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	§	Docket No.:	24061.65
Yu-Ling Chang, et al.	§		(TSMC2003-0230)
	§		
Serial No.: 10/775,802	§	Customer No.	42717
	§		
Filed: February 10, 2004	§	Group Art Unit:	2121
	§		
For: Tank Scheduling Optimization for	§	Examiner:	To Be Determined
Replicated Chemical in a Semiconductor	§		
Manufacturing Wet Bench	§		

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As a representative of the Assignee, Taiwan Semiconductor Manufacturing Company, Ltd., I hereby appoint the following attorneys to prosecute the above-identified application and to transact all business in the United States Patent and Trademark Office in connection therewith:

Practitioners associated with the Customer Number

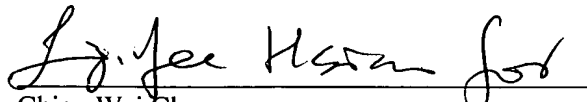
42717

Please direct all correspondence and telephone calls to the address associated with the above-mentioned Customer Number.

The undersigned representative for the Assignee certifies that the assignee is the assignee of the entire right, title and interest in the above-identified patent application. A copy of the assignment or other documents in the chain of title are attached.

Executed the 28 day of Dec., 2004.

Taiwan Semiconductor Manufacturing Company, Ltd.


Chien Wei Chou
Director, IP Division

ASSIGNMENT

WHEREAS, we,

- | | | | |
|-----|-------------------|----|--|
| (1) | Yu-Ling Chang | of | 1F, No. 8, Lane 47, Jiangong 1st Rd.
Hsinchu City 300, Taiwan, R.O.C.
Citizenship: Taiwan, R.O.C. |
| (2) | Chen Chien Hsiung | of | 5F, No. 18, Yonghua 2nd St.
Sinshih Township, Tainan County 744,
Taiwan, R.O.C.
Citizenship: Taiwan, R.O.C. |
| (3) | Hui-Tang Liu | of | No. 18-4, Lane 459, Yong 2nd St.
Yong Kang City, Tainan County 710, Taiwan
Citizenship: Taiwan, R.O.C. |

have invented certain improvements in

**TANK SCHEDULING OPTIMIZATION FOR REPLICATED CHEMICAL IN A
SEMICONDUCTOR MANUFACTURING WET BENCH**

for which we have executed an application for Letters Patent of the United States of America, of even date herewith; and

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd., ("TSMC"), No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China, is desirous of obtaining the entire right, title, and interest in, to and under the said invention and the said application in the United States of America and in any and all countries foreign thereto;

NOW, THEREFORE, for One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said TSMC, its successors, legal representatives, and assigns, the entire right, title, and interest in, to and under the said invention, and the said application, and all divisional, renewal, substitutional, and continuing applications thereof, and all Letters Patent of the United States of America which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may be filed for said invention in any country or countries foreign to the United States of America, and all extensions, renewals, and reissues thereof, and all prior patents and patent applications from which a filing priority of the above-described patent application may be obtained, including the right to collect past damages; and we hereby authorize and request the Commissioner of Patents of the United States of America, and any official of any country or countries foreign to the United States of America, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said invention to the said TSMC, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to said TSMC, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal, substitutional, continuing, and reissue applications, make all rightful declarations and/or oaths and generally do everything possible to aid the said TSMC, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

First Inventor Name: Yu-Ling Chang
Residence Address: 1F, No. 8, Lane 47, Jiangong 1st Rd.
Hsinchu City 300, Taiwan, R.O.C.

Dated: 2004.2.2

Yu Ling Chang
Inventor Signature

Dated: _____

Witness Signature
Witness Name: _____

Second Inventor Name: Chen Chien Hsiung
Residence Address: 5F, No. 18, Yonghua 2nd St., Sinshih Township
Tainan County 744, Taiwan, R.O.C.

Dated: 2004.2.2

Chen Chien Hsiung
Inventor Signature

Dated: _____

Witness Signature
Witness Name: _____

Patent / Docket No. 24061.65 / TSMC2003-0230
Customer No. 27683

Third Inventor Name: Hui-Tang Liu
Residence Address: No. 18-4, Lane 459, Yong 2nd St., Yong Kang City
Tainan County 710, Taiwan

Dated: 2/2/2004

Hui-Tang Liu
Inventor Signature

Dated: _____

Witness Signature
Witness Name: _____

R-65705.1